

Claims

1. A display device to display data corresponding to a coloured image with relatively dark and light regions so as to provide a visual representation of the image, without being illuminated by a separately energisable illumination source, configured so that the relatively dark regions are displayed lighter than indicated by the image data whereby to compensate for image darkening in the visual representation of the image produced by the display device.

2. A device according to claim 1 including processing circuitry to receive the data corresponding to the image and configured to perform filtering of the image data so as to produce filtered image data wherein the relatively dark region is represented by filtered data which corresponds to a region which is lighter than the relatively dark region.

3. A device according to claim 2 wherein the processing circuitry is configured to filter the image data according to a predetermined transfer function.

4. A device according to claim 3 wherein the transfer function is selectively alterable.

5. A device according to claim 4 including a photodetector for detecting ambient light levels, the transfer function being selectively alterable in accordance with the level of ambient light detected by the photodetector.

6. A device according to claim 4 including a user operable control to alter the transfer function selectively.

7. A device according to claim 1 including an array of individually energisable display elements.

8. A device according to claim 7 including a reflector to reflect ambient
5 light through the display elements.

9. A device according to claim 1 comprising a liquid crystal or an electrophoretic or an interference display device.

10. A device according to claim 1 including a selectively energisable light
10 source for illuminating the display in low light conditions.

11. A portable electronic apparatus including a display device according to
claim 1.

12. Apparatus according to claim 11 comprising a mobile telephone
15 handset.

13. Apparatus according to claim 11 wherein the handset includes a
20 controller operable to receive digital image data transmitted thereto via a radio link and to perform digital filtering of the image data so that the relatively dark regions are displayed lighter than indicated by the image data.

14. Apparatus according to claim 11 wherein the display device has a
25 display driver including a processor operable to filter the image data so that the relatively dark regions are displayed lighter than indicated by the image data.

15. Apparatus according to claim 11 and comprising a PDA.

16. A computer program for driving a processor configured to provide drive signals for a display device such that it displays data corresponding to a coloured image with relatively dark and light regions and provides a visual representation of the image without being illuminated by a separately energisable illumination source, the program being operable to filter the image data so that the relatively dark regions are displayed lighter than indicated by the image data, whereby to compensate for image darkening in the visual representation of the image produced by the display device.

10 17. A method of displaying image data corresponding to a coloured image with relatively dark and light regions utilising a display device that provides a visual representation of the image without being illuminated by a separately energisable illumination source, the method comprising filtering the image data so that the relatively dark regions are displayed lighter than indicated by the image data whereby to compensate for image darkening in the visual representation of the image produced by the display device.